

The reason Examiner has withdrawn claim 21 is “the method can be performed with a different light source (e.g., not a photodiode) such as a fluorescent light source”. Applicant respectfully wishes to point out that this is an error. With the utmost respect, it appears Examiner has confused elements. The photodiode 26 is totally different than the light source 42. The photodiode, as clearly stated in the description, apparatus claims and method claim, “is adapted to convert light emission transmitted thereto from said optical waveguide to a current”. This is not a light source, and of course a fluorescent light source cannot convert light emission transmitted thereto from the optical waveguide to a current. Thus claim 21 is indeed drawn to the same invention.

Claims 1, 5-10 and 12-19 stand rejected under 35 USC §103(a) as being unpatentable over Shain et al (US 6027459), Douglas et al. (US 5951492), Moerman et al (US 6706159) or Stiene et al. (US 2004/0096959) in view of Eason et al (5186897) alone or further in view of Tenerz et al (US 4941473).

Claim 20 stands rejected under 35 USC §103(a) as being unpatentable over Shain et al (US 6027459), Douglas et al. (US 5951492), Moerman et al (US 6706159) or Stiene et al. (US 2004/0096959) in view of Eason et al (5186897) alone or further in view of Tenerz et al (US 4941473), as applied above, and further in view of Stanton et al (US 2004/0219523).

Applicant respectfully traverses these rejections as has been previously explained. The optical waveguide in Eason et al. is used in a different manner than the instant invention. As stated in the previous response, Eason et al. does not teach using an optical waveguide to optically connect the optical sensor to the processor. Instead, Eason et al. teaches using the optical waveguide as the place where the reaction takes place and uses an external fluorescence measuring device to measure the fluorescence created in the optical waveguide. The fluorescence measuring device is not connected to the optical waveguide. In contrast, in the present invention, the optical waveguides optically connect the optical sensor to the processor. This is entirely different from Eason et al.

Examiner has responded to the above as follows:

Applicant's traverse the application of Easton et al. stating this reference fails to teach the claimed connection to the optical waveguide. This is not convincing because Easton et al. is only used to teach the advantages of using an optical waveguide. The Office maintains Shain et al. (USP 6,027,349), Douglas et al. (USP 5,951,492), Moerman et al. (USP 6,706,159) and Stiene et al. all teach the claimed attachment to the processor.

This is respectfully traversed. Applicant will show one-by-one, that none of the cited art has the feature of the processor as claimed in the instant invention, i.e., “a processor disposed in a second housing in communication with said optical sensor adapted to process a signal from said optical sensor, said signal being a function of said optically-sensible reaction, wherein said processor comprises a microprocessor and a photodiode, said processor being connected to a second optical waveguide disposed in said second housing, said second optical waveguide being connected to a second optical connector which mates with said first optical connector so as to effect optical communication between said processor and said optical sensor, wherein said photodiode is adapted to convert light emission transmitted thereto from said optical waveguide to a current”.

1. Shain only mentions a processor once in col. 15, lines 41-56: “The electronics 20 may incorporate a microprocessor or microcontroller. The function of the electronics 20 is to switch power on and off to operate the various components in the apparatus. These components include, but are not limited to, the vacuum pump 14. The electronics 20 can also be use to switch power on and off to operate components in alternative embodiments, e.g., heating elements, lancets, indicating devices, and valves. Electronics suitable for this invention is the "TATTLETALE MODEL 5 F" controller/data logger, commercially available from Onset Computer Corporation, 536 MacArthur Blvd. P.O. Box 3450, Pocasset, Mass. 02559-3450. Auxiliary electronic devices, such as power transistors, pressure monitors, and OP-Amps (operational amplifiers), may also be required in order to provide an interface between the controller and the operational components.”

With the utmost respect, the electronics 20 has nothing to do with the claimed feature of “process a signal from said optical sensor, said signal being a function of said optically-sensible reaction, wherein said processor comprises a microprocessor and a photodiode.”

2. Douglas et al. never even describes a processor.

3. Moerman et al. only mentions a processor once in col. 9, lines 35-56: “FIG. 10 shows a schematic representation of the electronics which can incorporated in a device in accordance with the invention. As shown, input signals are provided from the sensors and from any included skin-contact or sufficient-sample detector systems to a signal processing system. These signals are transmitted via analog circuitry to a processor which performs data analysis. This processor provides a signal to display driver which is connected (via a wired or wireless connection) to an output display. The processor may also provide a signal via a

wired or wireless connection to an alarm generator. The display and the alarm generator together constitute the output portion of the device. The data analysis processor also communicates with a memory device, for example an EEPROM, in which information including calibration information and previous results may be stored. A timer is also provided which is activated by the data analysis software. This timer provides functional output signals to control a stepper motor (for rotating the sensor disk or spindle) and a vacuum generator (if present). Values from the timer may also be stored in the memory EEPROM for utilization by the data analysis processor.”

With the utmost respect, this processor has nothing to do with the claimed feature of “process a signal from said optical sensor, said signal being a function of said optically-sensible reaction, wherein said processor comprises a microprocessor and a photodiode.”

4. Stiene et al. only mentions a processor once in paragraph [0154]: “The chip 400 has an edge connector 401 for electrically connecting electrodes (as will be described) to a controller (not shown). A controller can contain logic, memory and processors for controlling the electronics of the chip 400 and optionally displaying any outputs (as, for example, the function and operation of controller 102 in FIG. 3).”

With the utmost respect, this processor has nothing to do with the claimed feature of “process a signal from said optical sensor, said signal being a function of said optically-sensible reaction, wherein said processor comprises a microprocessor and a photodiode.”

Thus, the rejections are respectfully deemed overcome.

As previously noted, with regard to claim 20, Examiner repeats and states:

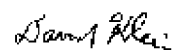
Stanton et al. teach in paragraph [0255] a “surface Plasmon resonance sensor” (referenced hereafter as “SPR”) in combination with a waveguide to gain the advantages of real time analysis of biological sample. Paragraph[0767] teach the SPR provides very sensitive analysis of binding/unbinding of analytes.

This is respectfully traversed. There is no such statement about a waveguide in Stanton et al and it is unknown what the Examiner is quoting. Indeed paragraph [0255] says nothing at all about SPR. Paragraph [0767] and following paragraphs are silent about using SPR with a waveguide. With the utmost respect, Examiner has not addressed this rebuttal at all in the office action.

Accordingly, claims 1, 5-10 and 12-21 are respectfully deemed allowable. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Please note: Recognizing that Internet communications are not secure, the undersigned hereby authorizes the USPTO to communicate with the undersigned concerning any subject matter of this application by electronic mail. The undersigned understand that a copy of these communications will be made of record in the application file.

Respectfully submitted,
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